

REMARKS

In accordance with the foregoing, claims 12, 20 and 38 have been amended. No new matter is being presented. Therefore, claims 12, 15-17, 20, 27, 28 and 35 are pending and reconsideration is respectfully requested.

DOUBLE PATENTING REJECTIONS:

Claims 12 and 28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 18 and 28 of copending Application No. 10/737,837. However, since the rejections of these claims are provisional, it is premature to address them at this time.

CLAIM OBJECTIONS:

The dependency of claim 20 was objected to. However, since claim 20 has been amended to depend from claim 12, it is respectfully requested that the objection be withdrawn.

REJECTIONS UNDER 35 U.S.C. §112:

Claim 20 is rejected under 35 U.S.C. §112, first paragraph, because the claim, according to the Office Action, "adds a third protective circuit to the lithium battery," and "the original specification only supports two safety devices." In response, however, applicants note that claim 20 only recites that the first lead further comprises a *third lead plate* electrically connecting the protecting circuit and the second terminal and that the claim language is not significantly different from that of the language of original claim 20. Also, it is noted that this subject matter was described in paragraph [0022] of the original specification. Thus, the claim is believed to be supported by the as-filed application.

Claims 12, 15-17, 20-27, 28, and 35-38 are rejected under 35 U.S.C. §112, first paragraph. According to the Office Action, the recitation of the first lead being connected to the PTC element with the cladding layer of the first lead being connected to the can is new matter. In support of this position, the Examiner relies solely on his interpretation of FIG. 6B but, at the same time, ignores the illustration of FIG. 5B, which illustrates the safety device as claimed.

Claims 12, 15-17, 20, 27, 28, and 35-38 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, the Office Action states that the language of the claim is awkward and difficult to understand and questions whether the safety device and the PTC element are separate elements. As to the first issue, although the applicants believe that the claim language is clear on its face, amendments have been made to improve the form of claims 12 and 38. As to the second issue, applicants note that the PTC element is a component of the safety device shown in at least FIG. 5B.

TELEPHONE INTERVIEW WITH THE EXAMINER:

Applicants wish to thank the Examiner for the courtesy of the telephone interview during which applicants discussed claim amendments and the Examiner explained the bases for the outstanding obviousness rejections.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 12, 17, 20, 27, 28 and 35-38 are rejected under 35 U.S.C. §103(a) as being unpatentable over Watanabe (U.S. Patent 6,492,058) in view of Morishita (U.S. Patent 5,976,729) and Pedicini (U.S. Patent 5,188,909). These rejections are overcome.

Regarding the rejections of claims 12 and 38, it is noted that these claims have been amended and now recite that the safety device includes a positive temperature coefficient (PTC) element that is adjacent to the portion of the first lead such that the PTC element is separated from the can by the portion of the first lead. In other words, the claimed PTC element is not in contact with the can. Applicants respectfully assert that this subject matter is not shown in the cited references and that any potential modification of the cited references (i.e., as part of a potential obviousness rejection alluded to by the Examiner during the telephone interview) to imitate the claimed invention would run counter to the teachings of the references.

First, applicants submit that the structure of the presently claimed safety device, with the PTC element being separated from the can, is not shown by any of the cited references. This can be seen in that the reference to Watanabe is the only reference being cited for the teaching of the positive temperature coefficient (PTC) safety device. According to Watanabe, the PTC device 13 is connected in series with the battery and is disposed in contact with the battery surface. *See Watanabe at column 13, lines 43-45.*

Thus, since Watanabe does not disclose a PTC device that is separated from the can as

in the claimed invention, and since no other reference has been cited as providing the claimed PTC element, applicants respectfully assert that the claims are patentably distinguished from the cited references and that, therefore, the rejections of the claims are overcome.

Secondly, applicants submit that any modification of Watanabe to suggest that the PTC device of Watanabe could be separated from the battery, as in the claimed invention, runs counter to the teachings of the reference and is therefore improper. For support, applicants note that Watanabe teaches that "the resistance of the PTC device 13 rapidly increases when the battery temperature rapidly climbs to a prescribed temperature." That is, it is the contact between the PTC device and the battery, in Watanabe, that allows the increase in battery temperature result in an increase in PTC device temperature. As such, the contact between the PTC device and the battery directly affects the operation of the PTC device. Were the PTC device to be separated from the battery, as in the claimed invention, the operation of the PTC device would be impaired.

Thus, applicants respectfully assert that any proposed or future modification of Watanabe that suggests that the PTC device of Watanabe can be separated from the battery of Watanabe is improper and that any rejections based on that modification are likewise improper.

Regarding the rejections of claims 17, 20, 27, 28 and 35-37, applicants note that these claims depend from claim 1 and that, therefore, these claims are allowable for at least the reasons set forth above.


CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited. IF there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters. If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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